

Fluoride-Adjusted Public Water Supplies in New Jersey

September 2003

All ground and surface water in the United States contains some naturally occurring fluoride. If a community's water supply contains less than 0.7 parts fluoride per million parts water,¹ the water purveyor can adjust the fluoride concentration for tooth decay prevention by raising the fluoride concentration, bringing it to the level recommended for decay prevention. In New Jersey, the range of fluoride concentrations recommended for decay prevention is 0.9-1.0 parts per million.²

When fluoride is supplied in a child's drinking water or diet through supplemental additives, the developing primary and permanent teeth absorb protecting fluorides from the blood. This brings about a permanent strengthening of the tooth enamel chemical structure.

In studies conducted from 1976 through 1987, the level of decay reduction achieved through water fluoridation in industrialized countries was:

- 30 – 60% in the primary dentition or baby teeth;
- 20 – 40% in the mixed dentition (aged 8 to 12);
- 15 – 35% in the permanent dentition or adult teeth (aged 14 to 17); and
- 15 – 35% in the permanent dentition (adults and seniors).³

For additional information on this subject, contact:

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School and Oral Health
PO Box 364
Trenton, NJ 08625-0364
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N.J. Dept. of Environmental Protection
Bureau of Safe Drinking Water
PO Box 426
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¹ parts per million

² Water Fluoridation— A Manual for Engineers and Technicians, United States Public Health Service, Centers for Disease Control and Prevention, September 1986

³ Fluoridation *Facts*, American Dental Association, 1999

WATER PURVEYORS AND COMMUNITIES SERVING FLUORIDE-ADJUSTED DRINKING WATER

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At various times of the year, communities listed in *italics* may contain fluoride at less than optimum levels, or receive non-fluoridated water. Check with your water utility for more information regarding fluoridation levels in your area.

Populations are presented only for the part of the municipality serviced by a fluoridating water system (if known). Populations shown are served by public water systems, not private wells.

COUNTY	WATER PURVEYOR	COMMUNITIES SERVED	ESTIMATED FLUORIDATED POPULATION
Atlantic	Egg Harbor City Water Department	Egg Harbor City Galloway Township (part)	4,700 ---
Burlington	Consumers NJ - Hamilton Square	Chesterfield Township (part)	---
Burlington	McGuire Air Force Base	McGuire Air Force Base	9,000
Burlington	Mount Laurel MUA	Mount Laurel Township (part served by Mt. Laurel MUA only)	---
Burlington	Willingboro MUA	Willingboro Township Westampton Township (part)	40,000 ---
Hunterdon	Elizabethtown Water Company	Raritan Township (except Maple Glen) Readington Township	--- 15,803
Mercer	Consumers NJ - Hamilton Square	Hamilton Township (part) Washington Township	--- 10,275
Mercer	East Windsor MUA	East Windsor Township	25,000
Mercer	Elizabethtown Water Company	Princeton Borough Princeton Township West Windsor Township	14,203 16,027 21,907
Mercer	Hightstown Water Department	Hightstown Borough	5,216
Mercer	Trenton Water Department	Ewing Township Hamilton Township (part) Hopewell Township Lawrence Township (part served by Trenton Water Department) Trenton City	35,707 --- 16,105 --- 85,403
Middlesex	East Brunswick Water Department	East Brunswick Township Helmetta Borough	46,756 1,825
Middlesex	Elizabethtown Water Company	Cranbury Township (sections served by Elizabethtown Water Company) Kingston (also in Somerset County) Plainsboro Township (sections served by Elizabethtown Water Company) South Brunswick Township	--- --- --- 37,734
Middlesex	South Brunswick Township Water Division	South Brunswick Township	Supplements Elizabethtown Water Company in South Brunswick
Monmouth	Allentown Water Department	Allentown Borough	2,000
Monmouth	Consumers NJ – Hamilton Square	Upper Freehold Township (part)	---
Monmouth	Freehold Borough Water Dept.	Freehold Borough	11,000
Monmouth	Freehold Township Water Dept.	Freehold Township	32,000

COUNTY	WATER PURVEYOR	COMMUNITIES SERVED	ESTIMATED FLUORIDATED POPULATION
Monmouth	New Jersey American Water Company– Monmouth System	Allenhurst Borough	718
		Asbury Park City	16,930
		<i>Avon-by-the-Sea Borough</i>	---
		<i>Belmar Borough</i>	---
		Bradley Beach Borough	4,793
		Deal Borough	1,070
		Earle N.A.D.	2,800
		Eatontown Borough	14,008
		<i>Fair Haven Borough</i>	---
		Fort Monmouth	5,600
		Highlands Borough	5,097
		Interlaken Borough	900
		<i>Keansburg Borough</i>	10,732
		<i>Little Silver Borough</i>	---
		Loch Arbor Village	280
		Long Branch City	31,340
		<i>Matawan Borough</i>	---
		Middletown Township	66,327
		Monmouth Beach Borough	3,595
		Neptune City Borough	5,218
		Neptune Township	27,690
		Ocean Township	26,959
		Oceanport Borough	5,807
		<i>Red Bank Borough</i>	---
		Rumson Borough	7,137
		Sea Bright Borough	1,818
		Shrewsbury Borough	3,590
		Shrewsbury Township	1,098
		South Belmar Borough	1,806
		Tinton Falls Borough	15,053
		West Long Branch Borough	8,258
Monmouth	S B Water & Sewer Company	The Grande at Colt's Neck	640
Ocean	Beach Haven Water Department	Beach Haven Borough	1,278
Ocean	New Jersey American Water Company – Ocean System	Bay Head Borough	977
		Brick Township (southern part)	1,293 (pop. served)
		Dover Township (northern part)	3,935 (pop. served)
		Lavallette Borough (part)	289 (pop. served)
Somerset	Elizabethtown Water Company	Mantoloking Borough	504
		Branchburg Township (including Neshanic Station)	14,566
		Bridgewater Township (Finderne, Bradley Gardens, and Green Knoll sections)	---
		Hillsborough Twp. (including Belle Mead)	36,634
		Kingston (also in Middlesex County)	---
		Millstone Borough	410
		Montgomery Township (including Skillman and Belle Mead)	17,481
		Peapack & Gladstone Borough	2,433
		Raritan Borough	6,338
Union	Rahway Water Department	Somerville Borough	12,243
		Rahway City	25,500

In the preceding tables, there are water systems and serving communities that experience population surges during the summer months. Examples: New Jersey American Water Company – Ocean: During the winter months, the population served ranges from 6,000-7,000 people. It rises to about 50,000 people during the summer months. Belmar Water Department serves a winter population of about 6,500 people, and during the summer months about 20,000 people. Avon by the Sea Water Department – winter 2165, summer 5000. Many other Monmouth County shore communities experience the same scenario.

Among other water systems, there are cross connections, interconnections, multiple consecutive systems, systems that use their own wells part of the year, purchase 100% fluoridated water part of the year, and blend or serve non-fluoridated water at other times. There are fluoridating systems that supply part of a municipality, the balance served by non-fluoridating water systems. There are communities that are split between two municipalities (eg: Belle Mead) and communities split between two counties (Kingston).

In Monmouth County, various communities with their own water systems 100% bulk purchase fluoridated water from New Jersey American-Monmouth system from about October through April or May, then open their own treatment plants using their own wells and serve non-fluoridated water for the balance of the year. These include Avon by the Sea, Belmar, Keansburg, Matawan, and Red Bank.

An example of another distribution network is in Middlesex County. East Brunswick Water Department (in the center of New Jersey) buys its water from North Jersey District Water Authority (in North Jersey). This water is delivered to Middlesex Water Company (central New Jersey) which treats the water, but does not fluoridate. This water is piped to East Brunswick Water Company, which then fluoridates, distributes to East Brunswick Township, which also bulk sells to three other community water systems. One of these systems, Helmetta Water Department, then pipes this fluoridated water throughout its distribution system, Helmetta Borough. The other two community water systems, South River Water Department and Spotswood Water Department, supplement this purchased water with water from their own wells, at times blending, other times not, to supply their respective municipalities, South River Borough and Spotswood Borough. South River Borough and Spotswood Borough are not listed in the chart.